

### **REMARKS**

Claims 1-5 and 7-9 are pending. No amendments are made at this time.

Applicants note that the Examiner has withdrawn the prior rejection of Claims 1-5 under 35 U.S.C. 102(b) over Tomita, T. et al. (Rare Earths, 2002).

**Claims 1-5 and 9 are rejected under 35 U.S.C. 103(a) over Tomita, T. et al. (Rare Earths, 2002), in view of Alburger, J.R. (U.S. Patent 3,567,932).** (Office Action, page 3)

Tomita describes a Eu(hfa-D)3BINAPO complex. Alburger describes a fluorescent metal-organic coordination complex.

The rejection states that Alburger discloses various metal elements, including ytterbium, and diketones, including 4,4,4-trifluoro-1-phenyl-1,3 butanedione, for the formation of a fluorescent compound.

The rejection alleges that it would have been obvious to substitute the lanthanide Ytterbium for the lanthanide Europium to obtain a different colored dye complex. Applicants respectfully disagree.

Applicants respectfully believe that Alburger is mischaracterized. Specifically, Applicants believe Alburger has been mistakenly read to imply the interchangeability of each of the metal compounds with each of the chelating ligands. Applicants further note that if one of ordinary skill in the art were to take only the specifically mentioned ligands, and limit oneself to only one type of ligand at a time, then Alburger would be read to encompass at least 783 possible coordination compounds. Indeed, as Alburger lists many generic classes, Applicants respectfully assert that Alburger reads on a genus which encompasses thousands of compounds.

The rejection alleges that Alburger teaches “using beta-diketones in complex with lanthanoids for forming brightly fluorescent ultraviolet-responsive dyes.” However, Alburger specifically states that “**not all ligands may be used with each and every one of the listed metals to produce a useful fluorescent coordination compound**” (Column 5, lined 70-74,

emphasis added). Indeed, the disclosure which the rejection cites does not relate to a teaching of Lanthanides in general but instead to Europium specifically. The rejection has not shown any suggestion in Alburger that Ytterbium would possess similar benefits.

As such, Applicants respectfully assert that one of ordinary skill in the art would be unable to predict which ligands and which metal complexes would provide useful fluorescent compounds. That is, one of ordinary skill in the art would not be able to arrive at the claimed invention without undue experimentation. Furthermore, one of ordinary skill in the art would have had no reasonable expectation of success in achieving the results of the instant invention based on the teachings of Tomita and Alburger. It is respectfully requested that the rejections be reconsidered and withdrawn.

**Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as unpatentable over Tomita, T. et al. (Rare Earths, 2002) and Alburger, J.R. (U.S. Patent 3,567,932), as applied to claims 1-5 and 9 above, and in further view of Gladiali, S., et al., (Tetrahedron Asymmetry, 1998) and Reid J.C., et al., (JACS, 1950). (Office Action, page 5)**

The rejection alleges that Gladiali teaches methods of making enantiopure BINAPO and that Reid teaches methods for making and purifying 4,4,4-trifluoro-1-phenyl-1,3 butanedione. The rejection further alleges that it would have been obvious to one of ordinary skill in the art to utilize the enantiopure forms of these compounds to form enantiopure complexes.

Regardless of what Gladiali and Reid teach, neither Gladiali nor Reid, alone or in combination, rectifies the deficiencies of the underlying rejection over Tomita and Alburger. As such, even if one of ordinary skill in the art were to utilize the enantiopure BINAPO and the 4,4,4-trifluoro-1-phenyl-1,3 butanedione described by the rejection, there would still have been no reasonable expectation of success in achieving the results of the instant invention based on the teachings of the Tomita and Alburger alone or in combination with Gladiali and/or Reid.

Accordingly, Applicants respectfully contend that none of Claims 1-5 and 7-9 would have been obvious to a skilled person in the art over the cited references because of claimed chemical differences. Accordingly, Applicants respectfully request reconsideration and withdrawal of all rejections under 35 U.S.C. § 103.

### **CONCLUSION**

In view of the remarks made herein, the application is in condition for allowance. Favorable reconsideration of the application and prompt issuance of a Notice of Allowance are respectfully requested. If a telephone conference with Applicant's representative would be helpful in expediting prosecution of the application, Applicant invites the Examiner to contact the undersigned at the telephone number indicated below.

Applicant believes that no additional fees, other than the fee for the two-month extension of time, are required in connection with this paper. Nevertheless, Applicant authorizes the Director to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to Deposit Account No. 04-1105, under Order No. 80658(47762).

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Respectfully submitted,

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